

I. Amendments To The Claims

1. - 61. (previously canceled)

62. (currently amended) An isolated polypeptide fusion protein of IFNAR2 comprising (1) the sequence of SEQ ID NO: 2 and (2) a human immunoglobulin-constant domain, wherein the affinity of said polypeptide fusion protein for IFN- β is synergistically increased at least 25 to 100-fold compared to wild type human IFNAR2.

63.-65. (previously canceled)

66. (canceled)

67. (currently amended) The polypeptide fusion protein of claim 62, wherein the affinity to IFN- β is at least 30 pM.

68. (currently amended) The polypeptide fusion protein of claim 62, wherein the affinity to IFN- β is at least ~~25 to 100-fold~~ 50-fold higher than the affinity of the wild type polypeptide.

69. (canceled)

70. (currently amended) The polypeptide fusion protein of claim 62, wherein the polypeptide fusion protein is covalently bound to IFN.

71. (currently amended) The polypeptide fusion protein of claim 70, wherein the IFN is IFN- β .

72. (previously canceled)

73. (previously canceled)

74. (previously canceled)

75. (canceled)

76. (currently amended) A DNA encoding the polypeptide fusion protein of claim 62.

77. (currently amended) The DNA of claim 75, wherein the ~~polypeptide~~
fusion protein further comprises a signal peptide sequence.

78. (previously presented) The DNA of claim 76, wherein the signal peptide
sequence is that of human growth hormone.

79. (previously presented) A vector comprising the DNA according to any one
of claims 75-77, wherein the vector is capable of expressing the polypeptide in a
prokaryotic host cell or eukaryotic host cell.

80. (previously presented) A host cell comprising the vector of claim 78.

81. (currently amended) A method of producing an IFNAR2 mutant
~~polypeptide~~ **fusion protein** comprising:

- (a) cultivating the cell of claim 79 under conditions that cause the
expression of the ~~polypeptide~~ **fusion protein**; and
- (b) isolating the ~~polypeptide~~ **fusion protein**.

82. (currently amended) A composition comprising the ~~polypeptide~~ **fusion**
protein of claim 62.

83. (previously canceled).

84. (previously canceled)

85. (previously canceled).

86. (previously canceled).

87. (withdrawn) The composition of claim 82, further comprising IFN β .

88. (previously presented) A method of augmenting the anti-cancer, immune
modulating or anti-viral properties of IFN β comprising administering to a patient in need
thereof a therapeutically effective amount of the composition of claim 82.

89. (previously presented) The method of claim 88, wherein the method is for
augmenting the immune modulatory activities of IFN β in an autoimmune disease
selected from multiple sclerosis, rheumatoid arthritis, myasthenia gravis, diabetes, lupus
and ulcerative colitis.

90. (withdrawn) The method of claim 88, wherein the method is for augmenting the anti-cancer activities of IFN β in a disease selected from hairy cell leukemia, Kaposi's sarcoma, multiple myeloma, chronic myelogenous leukemia, non-Hodgkins's lymphoma and melanoma.

91. (withdrawn) The method of claim 88, wherein the method is for augmenting the anti-viral properties of IFN β in a disease selected from chronic granulomatous disease, condyloma acuminatum, juvenile laryngeal papillomatosis, hepatitis A and chronic infection with hepatitis B and C viruses.

92. (withdrawn) The composition of claim 87, wherein said polypeptide of claim 62 and said IFN β are covalently linked.

93. (previously presented) The composition of claim 82, further comprising an IFN antagonist.

94. (previously canceled).